REMARKS

The Examiner has rejected claims 1-53 under 35 U.S.C. §112, second paragraph as indefinite, stating:

> **Claims 1-53 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** ***The claims do not provide enough information such that a routineer in the art could employ the method based on the language in the claim.*** **Description of such circuitry is necessary. As it is, structural description is only in the broadest terms, terms too insufficient to achieve the claimed functionality. In claims where the disturbance frequency is required, for example, claim 4, there is no methodology to learn just how this is achieved. In other claims it is not clear how the storage element is connected to other components of the circuit. Additionally the switches are under-defined. Where in the figures are the second terminals of the switches connected to the second terminal of the transducer? Also, the mosfets in the figures are three terminal devices, while the claims (e.g. claims 5 and 13) indicate that they are two terminal devices.** ***Thus a routineer in the art is not provided with enough information to make the device based on the claim language.*** **The connections of the rectified circuit are likewise indefinite. Their "first and second input terminal[s] being connected across first and second terminals of the transducer" as claim 6 and other claims indicate, describes a structure in parallel to the transducer, but such a configuration is not shown in any figure. Again, in claim 6, et al., the storage element is merely listed. How it is connected to other components is not known. Claims which cite goals for extracting power, for example cl. 7, do not provide enough coherent structure such that it is clear how the power extraction is to occur.** ***Components are defined in terms of goals of the invention but with such sparse structural description that a routineer in the art could not achieve these goals were he to attempt to build the system based on such a description.*** **[emphasis added]**

Contrary to the Examiner's assertion, 35 U.S.C. §112, second paragraph, does not require that the claims "provide enough information such that a routineer in the art could employ the method based on the language in the claim" or "make the device based on the claim language."

35 U.S.C. §112, second paragraph states:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

MPEP §2171 states, in regard to 35 U.S.C. §112, second paragraph:

> There are two separate requirements set forth in this paragraph:

> (A) the claims must set forth the subject matter that applicants regard as their invention; and
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> (B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.
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> The first requirement is a subjective one because it is dependent on what the applicants for a patent regard as their invention. The second requirement is an objective one because it is not dependent on the views of applicant or any particular individual, but is evaluated in the context of whether the claim is definite - i.e., whether the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art.

Thus, 35 U.S.C. §112, second paragraph, requires that the "claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, §112 demands no more..." *Miles Laboratories, Inc. v. Shandon Inc., 27 USPQ2d 1123 (Fed. Cir. 1993)*. See also, e.g., *Personalized Media Communications, LLC v. U.S. Int'l Trade Comm'n, 48 USPQ2d 1880 (Fed. Cir. 1998).*

The Examiner is referred to 35 U.S.C. §112, first paragraph, which requires that the written description enable a person skilled in the art to make and use the invention.[1] Thus, it is the written description, not the claims, that provides a routineer in the art with the information to employ the method or make the device.

To address the Examiner's remarks regarding "it is not clear how the storage element is connected to other components of the circuit," applicant has amended claims 5, 6, 8-10, 12-14, 16-18, and 20 to recite that the storage element is connected to the electrical circuit.

The Examiner asks "Where in the figures are the second terminals of the switches connected to the second terminal of the transducer?" It is unclear why the Examiner has raised this question. The claims do not recite that second terminals of the switches are connected to the second terminal of the transducer. Rather, referring for example to claims 5 and 13, claims 5 and 13 recite "a first subcircuit connected to the second terminal of the inductor and a second terminal of the transducer, the first subcircuit including a switch." Thus, a subcircuit including a switch is connected to the second terminal of the transducer. There is no recitation of a switch being connected to a second

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[1] 35 U.S.C. §112, first paragraph: The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

terminal of a transducer, let alone a second terminal of a switch being connected to a second terminal of a transducer. An example of an embodiment in the specification that provides support for the language in claims 5 and 13 can be found at Fig. 19, and page 24, lines 26-27. The Examiner also states "the mosfets in the figures are three terminal devices, while the claims (e.g. claims 5 and 13) indicate that they are two terminal devices." While claims 5 and 13 recited subcircuits including switches, which in a particular embodiment are implemented as MOSFET 232 or 234, the claims do not recite that the switches are two terminal devices, but merely that the subcircuits include switches. Moreover, there is no requirement, statutory or otherwise, that every connection to a claimed element be recited.

The Examiner states "[t]he connections of the rectifier circuit are likewise indefinite. Their "first and second input terminal[s] being connected across first and second terminals of the transducer" as claim 6 and other claims indicate, describes a structure in parallel to the transducer, but such a configuration is not shown in any figure." Applicant directs the Examiner to, e.g., FIG. 24, and page 27, line 20 to page 29, line 1.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the Claims:

Claims 5, 6, 8-10, 12-14, 16-18, and 20 have been amended as follows:

5. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer such that a peak voltage experienced by the transducer is greater than two times higher than any peak voltage of an open circuit transducer due to the disturbance alone, the electrical circuit including

an inductor including first and second terminals, the first terminal being connected to a first terminal of the transducer,

a first subcircuit connected to the second terminal of the inductor and a second terminal of the transducer, the first subcircuit including a switch, and

a second subcircuit connected to the second terminal of the inductor and the second terminal of the transducer, the second subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

6. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer such that a peak voltage experienced by the transducer is greater than two times higher than any peak voltage of an open circuit transducer due to the disturbance alone, the electrical circuit including

a rectifier circuit including first and second input terminals and first and second output terminals, the first and second input terminal being connected across first and second terminals of the transducer,

an inductor including first and second terminals, the first terminal being connected to the first output terminal of the rectifier circuit, and

a subcircuit connected to the second terminal of the inductor and the second output terminal of the rectifier circuit, the subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

8. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer such that a peak voltage experienced by the transducer is greater than two times higher than any peak voltage of an open circuit transducer due to the disturbance alone,

a storage element connected to the electrical circuit for storing extracted power, and

an independent power source for supplying power to the electrical circuit.

9. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance, and

an electrical circuit connected across the transducer such that a peak of the integral of the current onto and off the transducer is greater than two times higher than any peak of an integral of a current of a short circuit transducer due to the disturbance alone, the electrical circuit including

an inductor including first and second terminals, the first terminal being connected to a first terminal of the transducer,

a first subcircuit connected to the second terminal of the inductor and a second terminal of the transducer, the first subcircuit including a switch, and

a second subcircuit connected to the second terminal of the inductor and the second terminal of the transducer, the second subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

10. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance, and

an electrical circuit connected across the transducer such that a peak of the integral of the current onto and off the transducer is greater than two times higher than any peak of an integral of a current of a short circuit transducer due to the disturbance alone, the electrical circuit including

a rectifier circuit including first and second input terminals and first and second output terminals, the first and second input terminals being connected across first and second terminals of the transducer,

an inductor including first and second terminals, the first terminal being connected to the first output terminal of the rectifier circuit, and

a subcircuit connected to the second terminal of the inductor and the second output terminal of the rectifier circuit, the subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

12. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance, and

an electrical circuit connected across the transducer such that a peak of the integral of the current onto and off the transducer is greater than two times higher than any peak of an integral of a current of a short circuit transducer due to the disturbance alone,

a storage element connected to the electrical circuit for storing extracted power, and

an independent power source for supplying power to the electrical circuit.

13. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a mechanical disturbance,

an electrical circuit including switching electronics connected across the transducer, the electrical circuit including

an inductor including first and second terminals, the first terminal being connected to a first terminal of the transducer,

a first subcircuit connected to the second terminal of the inductor and a second terminal of the transducer, the first subcircuit including a switch, and

a second subcircuit connected to the second terminal of the inductor and the second terminal of the transducer, the second subcircuit including a switch,

control logic which switch the switching electronics at a frequency greater than two times an excitation frequency of the disturbance, and

a storage element connected to the electrical circuit for storing extracted power.

14. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a mechanical disturbance,

an electrical circuit including switching electronics connected across the transducer, the electrical circuit including

a rectifier circuit including first and second input terminals and first and second output terminals, the first and second input terminals being connected across first and second terminals of the transducer,

an inductor including first and second terminals, the first terminal being connected to the first output terminal of the rectifier circuit, and

a subcircuit connected to the second terminal of the inductor and the second output terminal of the rectifier circuit, the subcircuit including a switch,

control logic which switch the switching electronics at a frequency greater than two times an excitation frequency of the disturbance, and

a storage element connected to the electrical circuit for storing extracted power.

16. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a mechanical disturbance,

an electrical circuit including switching electronics connected across the transducer,

control logic which switch the switching electronics at a frequency greater than two times an excitation frequency of the disturbance,

a storage element connected to the electrical circuit for storing extracted power, and

an independent power source for supplying power to the electrical circuit.

17. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer and capable of extracting power from the transducer and applying power to the transducer during different intervals in the course of the disturbance, the electrical circuit including

an inductor including first and second terminals, the first terminal being connected to a first terminal of the transducer,

a first subcircuit connected to the second terminal of the inductor and a second terminal of the transducer, the first subcircuit including a switch, and

a second subcircuit connected to the second terminal of the inductor and the second terminal of the transducer, the second subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

18. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer and capable of extracting power from the transducer and applying power to the transducer during different intervals in the course of the disturbance, the electrical circuit including

a rectifier circuit including first and second input terminals and first and second output terminals, the first and second input terminals being connected across first and second terminals of the transducer,

an inductor including first and second terminals, the first terminal being connected to the first output terminal of the rectifier circuit, and

a subcircuit connected to the second terminal of the inductor and the second output terminal of the rectifier circuit, the subcircuit including a switch, and

a storage element connected to the electrical circuit for storing extracted power.

20. (Amended) A system for extracting power, comprising:

a transducer that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance,

an electrical circuit connected across the transducer and capable of extracting power from the transducer and applying power to the transducer during different intervals in the course of the disturbance,

a storage element connected to the electrical circuit for storing extracted power, and

an independent power source for supplying power to the electrical circuit.